

IN THE CLAIMS:

1. (currently amended) A method for filtering packets received from a network using a programmable logic device-based packet filtering system ("PLD system"), comprising the steps of:

operating the PLD system in accordance with first configuration data, wherein in accordance with the first configuration data, the PLD system receives packets including at least first packets from the network, processes the first packets in accordance with a filtering operation, and conditionally transmits the processed first packets to an electronic connection coupled to the PLD system, wherein the PLD system processes the first packets in accordance with a first set of filtering rules based on the first configuration data;

receiving second configuration data for the PLD system, wherein the second configuration data is selectively received by the PLD system based on identification information for the PLD system, wherein the second configuration data are different from the first configuration data;

programming the second configuration data into the PLD system; and

operating the PLD system in accordance with the second configuration data, wherein, in accordance with the second configuration data, the PLD system receives packets including at least second packets from the network, processes the second packets in accordance with a filtering operation, and conditionally transmits the processed second packets to the electronic connection coupled to the PLD system, wherein the PLD system processes the second packets in accordance with a second set of filtering rules based on the second configuration data; and

providing a physical, user-activated switch/button interface physically connected to the PLD system, wherein in response to user activation of the switch/button interface the PLD system in real time selectively filters packets or blocks packet transmission in response to a state of the user-activated switch/button interface.

2. (previously presented) The method of claim 1, further comprising the step of, after the second configuration data are received by the PLD system, saving the second configuration data in non-volatile memory of the system.

3. (original) The method of claim 2, wherein the non-volatile memory comprises Flash memory, electrically erasable and programmable read only memory or battery-backed-up random access memory.

4. (currently amended) A method for filtering packets received from a network using a programmable logic device-based packet filtering system ("PLD system"), wherein the PLD system is one of a plurality of PLD systems coupled to receive packets from the network, comprising the steps of:

operating the PLD system in accordance with first configuration data, wherein in accordance with the first configuration data, the PLD system receives packets including at least first packets from the network, processes the first packets in accordance with a filtering operation, and conditionally transmits the processed first packets to an electronic connection coupled to the PLD system, wherein the PLD system processes the first packets in accordance with a first set of filtering rules based on the first configuration data;

receiving second configuration data for the PLD system, wherein the second configuration data is selectively received by the PLD system via one or more second packets from a computing system based on identification information for the PLD system, wherein the second configuration data are different from the first configuration data;

programming the second configuration data into the PLD system; and

operating the PLD system in accordance with the second configuration data, wherein, in accordance with the second configuration data, the PLD system receives packets including at least third packets from the network, processes the third packets in accordance with a filtering operation, and conditionally transmits the processed third packets to the electronic connection coupled to the PLD system, wherein the PLD system processes the third packets in accordance with a second set of filtering rules based on the second configuration data;

after receiving each of the one or more second packets, the PLD system sends at least a fourth packet to the computing system over the network, wherein each fourth packet acknowledges receipt of a corresponding one of the one or more second packets; and

providing a physical, user-activated switch/button interface physically connected to the PLD system, wherein in response to user activation of the switch/button interface the PLD system in real time selectively operates to filter packets or block packet transmission in response to a state of the user-activated switch/button interface.

5. (previously presented) The method of claim 4, wherein after receiving each of the one or more second packets, the PLD system saves second configuration data from the one or more second packets in non-volatile memory coupled to the PLD system.

6. (previously presented) The method of claim 5, wherein the PLD system saves the second configuration data in the non-volatile memory coupled to the PLD system from each of the one or more second packets prior to sending each fourth packet.

7. (previously presented) The method of claim 5, wherein, after receipt by the computing system of a fourth packet that acknowledges receipt by the PLD system of a final second packet, the computing system sends at least a fifth packet to the PLD system, wherein, in response to the fifth packet, the PLD system saves one or more data indicating that all of the second configuration data has been received and stored in the non-volatile memory.

8. (previously presented) The method of claim 4, wherein the second configuration data is loaded into the PLD system in response to a user command from a user.

9. (original) The method of claim 8, wherein the user command comprises a command input by a switch.

10. (original) The method of claim 9, wherein the switch comprises a physical switch on the PLD system.

11. (original) The method of claim 8, wherein the user command comprises a command entered via the computing system.

12. (previously presented) The method of claim 4, wherein one or more display devices provide visual feedback of the status of the PLD system.

13. (original) The method of claim 12, wherein the one or more display devices comprise one or more LEDs.

14. (original) The method of claim 12, wherein the one or more display devices comprise a liquid crystal display.

15. (previously presented) The method of claim 4, wherein the PLD system provides audio feedback indicative of the status of the PLD system.

16. (original) The method of claim 12, wherein at least one LED indicates that the step of loading the second configuration data into the PLD system is in process.

17. (previously presented) The method of claim 4, wherein the PLD system processes packets sent from the computing system in order to determine if the packets sent from the computing system contain one or more commands to which the PLD system is responsive.

18. (previously presented) The method of claim 17, wherein the PLD system extracts one or more commands to which the PLD system is responsive from the packets sent from the computing system.

19. (previously presented) The method of claim 19, wherein the step of receiving second configuration data for the PLD system sent from the computing system is selectively performed based on identification information for the PLD system provided from the PLD system to the computing system.

20. (previously presented) The method of claim 19, wherein the identification information is used to determine an identification of the second configuration data that are to be received by the PLD system.

21. (previously presented) The method of claim 1, wherein the second configuration data are stored in a location remote from the PLD system.

22. (original) The method of claim 21, wherein the location comprises storage coupled to the computing system.

23. (original) The method of claim 21, wherein the location comprises storage on a second network, wherein the computing system accesses the storage via the second network.

24. (previously presented) The method of claim 23, wherein the location is identified by an address of a node on the second network.

25. (original) The method of claim 23, wherein the second network comprises an Internet network.

26. (previously presented) The method of claim 25, wherein information that is indicative of the location comprises a URL.

27. (previously presented) The method of claim 14, wherein the plurality of PLD systems collectively respond to a plurality of commands that include one or more first commands to which the PLD system responds and also include one or more second commands to which the PLD system responds.

28. (original) The method of claim 27, wherein the first commands comprise core commands to which at least a second PLD system also responds.

29. (original) The method of claim 28, wherein the second commands comprise custom commands to which the second PLD system does not respond.

30. (original) The method of claim 1, wherein the network comprises a local area network.

31. (original) The method of claim 1, wherein the network comprises an Ethernet-based network.

32. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise UDP packets.

33. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise TCP packets.

34. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise Ethernet packets.

35. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise link layer packets.

36. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise network layer packets.

37. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise IP packets.

38. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise transport layer packets.

39. (previously presented) The method of claim 4, wherein at least certain of the first, second or third packets comprise IPX packets.

40. (previously presented) The method of claim 4, wherein at least certain of the packets sent by the computing system comprise broadcast packets having a predetermined address that are directed to a first predetermined port.

41. (previously presented) The method of claim 4, wherein at least certain of the packets sent by the PLD system comprise packets having a predetermined source address that are directed to a first predetermined port.

42. (original) The method of claim 1, wherein the PLD system does not implement a TCP/IP stack.

43. (original) The method of claim 1, wherein the PLD system comprises an FPGA.

44. (original) The method of claim 1, wherein the PLD system comprises an Internet security system.

45. (original) The method of claim 44, wherein the Internet security system comprises a firewall system.

46. (previously presented) The method of claim 4, wherein the PLD system comprises a device selected from the group consisting of a PDA, a mobile telephone, a portable computer, a game system, a household appliance, a video recording system and a paging device.

47. (previously presented) The method of claim 4, wherein the PLD system transmits packets containing information identifying one or more commands to which the PLD system responds, wherein the information is transmitted at least in part in the form of XML code.

48. (previously presented) The method of claim 4, wherein the PLD system includes a first logic unit that processes packets sent by the computing system, wherein the first logic unit identifies one or more commands in the packets sent by the computing system.

49. (previously presented) The method of claim 48, wherein the PLD system includes one or more second logic units coupled to the first logic unit that carries out one or more operations that correspond to the one or more commands.

50. (original) The method of claim 49, wherein the PLD system includes one or more third logic units, wherein the third logic units carry out one or more logic operations that correspond to packets that the PLD system transmits to the computing system.

51. (previously presented) The method of claim 4, wherein the PLD system includes first and second logic portions, wherein the first logic portion operates to communicate packets in accordance with a protocol with the computing system, wherein the second logic portion operates to carry out a process that does not comprise communicating packets in accordance with the protocol with the computing system.

52. (previously presented) The method of claim 4, wherein the computing system operates in response to software that is transmitted to the computing system from the PLD system.

53. (previously presented) The method of claim 4, wherein the computing system operates in response to software that is stored in a location identified by a packet from the PLD system.

54. (original) The method of claim 53, wherein the location comprises a storage location on a second network coupled to the computing system.

55. (original) The method of claim 54, wherein the location is identified by a network address or URL.

56. (original) The method of claim 53, wherein the location is determined from an identifier for the PLD system.

57. (previously presented) The method of claim 4, wherein, after the PLD system operates in accordance with the first configuration data, in response to a user input the PLD system reconfigures to operate to receive packets in accordance with the second configuration data.

58. (original) The method of claim 1, wherein the PLD system comprises programmable logic having at least a first logic portion and a second logic portion, wherein, in response to loading of the second configuration data, the second logic portion is reconfigured and the first logic portion is not reconfigured.